# 10th BIOLOGY

## NOTESPK Test Series

Chapter Wise, Quarter Wise, Half Book, Full Book Test Series

# Biology

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English Medium Tests

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NOTESPK Test Series

# VERSATILE

# CLASS TESTS

# BIOLOGY

## CLASS 10th

English Medium

Chapter Wise, Quarter Wise, Half Book, Full Book Tests

**Courtesy: Versatile Publishers, Faisalabad**

# Key to Biology (English Medium)

| Test # 1 | 1(b) | 2(d) | 3(d) | 4(c) | 5(c) | 6(b) | 7(c) | 8(d) | 9(b) | 10(c) | 11(b) | 12(a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test # 2 | 1(b) | 2(c) | 3(b) | 4(c) | 5(a) | 6(c) | 7(c) | 8(a) | 9(b) | 10(d) | 11(d) | 12(a) |
| Test # 3 | 1(a) | 2(d) | 3(c) | 4(b) | 5(a) | 6(b) | 7(d) | 8(a) | 9(c) | 10(b) | 11(c) | 12(a) |
| Test # 4 | 1(a) | 2(b) | 3(c) | 4(d) | 5(c) | 6(b) | 7(d) | 8(d) | 9(a) | 10(c) | 11(c) | 12(b) |
| Test # 5 | 1(c) | 2(a) | 3(d) | 4(d) | 5(b) | 6(b) | 7(b) | 8(c) | 9(c) | 10(a) | 11(a) | 12(c) |
| Test # 6 | 1(a) | 2(c) | 3(c) | 4(b) | 5(a) | 6(b) | 7(a) | 8(c) | 9(d) | 10(c) | 11(b) | 12(d) |
| Test # 7 | 1(d) | 2(d) | 3(c) | 4(c) | 5(a) | 6(a) | 7(b) | 8(b) | 9(d) | 10(a) | 11(d) | 12(c) |
| Test # 8 | 1(b) | 2(b) | 3(c) | 4(b) | 5(a) | 6(c) | 7(d) | 8(c) | 9(a) | 10(a) | 11(b) | 12(d) |
| Test # 9 | 1(b) | 2(b) | 3(c) | 4(d) | 5(c) | 6(a) | 7(a) | 8(b) | 9(c) | 10(d) | 11(b) | 12(b) |
| Test # 10 | 1(b) | 2(a) | 3(b) | 4(a) | 5(a) | 6(c) | 7(d) | 8(c) | 9(a) | 10(c) | 11(a) | 12(b) |
| Test # 11 | 1(a) | 2(d) | 3(b) | 4(c) | 5(b) | 6(a) | 7(b) | 8(a) | 9(d) | 10(a) | 11(b) | 12(c) |
| Test # 12 | 1(a) | 2(d) | 3(c) | 4(d) | 5(a) | 6(a) | 7(b) | 8(b) | 9(d) | 10(a) | 11(d) | 12(b) |
| Test # 13 | 1(c) | 2(d) | 3(b) | 4(a) | 5(a) | 6(b) | 7(c) | 8(c) | 9(a) | 10(b) | 11(b) | 12(a) |
| Test # 14 | 1(b) | 2(b) | 3(d) | 4(c) | 5(c) | 6(b) | 7(d) | 8(a) | 9(c) | 10(b) | 11(b) | 12(a) |
| Test # 15 | 1(b) | 2(c) | 3(d) | 4(c) | 5(b) | 6(d) | 7(a) | 8(d) | 9(a) | 10(c) | 11(c) | 12(a) |
| Test # 16 | 1(d) | 2(d) | 3(c) | 4(a) | 5(a) | 6(a) | 7(b) | 8(a) | 9(d) | 10(c) | 11(a) | 12(b) |
| Test # 17 | 1(d) | 2(c) | 3(b) | 4(b) | 5(a) | 6(b) | 7(c) | 8(c) | 9(d) | 10(d) | 11(d) | 12(a) |
| Test # 18 | 1(c) | 2(a) | 3(d) | 4(b) | 5(c) | 6(d) | 7(b) | 8(a) | 9(b) | 10(a) | 11(b) | 12(a) |
| Test # 19 | 1(d) | 2(a) | 3(d) | 4(a) | 5(b) | 6(d) | 7(a) | 8(b) | 9(a) | 10(b) | 11(b) | 12(a) |
| Test # 20 | 1(b) | 2(a) | 3(c) | 4(a) | 5(b) | 6(d) | 7(c) | 8(d) | 9(c) | 10(d) | 11(a) | 12(c) |
| Test # 21 | 1(d) | 2(c) | 3(b) | 4(c) | 5(c) | 6(a) | 7(a) | 8(d) | 9(b) | 10(a) | 11(a) | 12(b) |
| Test # 22 | 1(a) | 2(d) | 3(a) | 4(c) | 5(a) | 6(c) | 7(b) | 8(b) | 9(a) | 10(a) | 11(a) | 12(a) |
| Test # 23 | 1(b) | 2(a) | 3(b) | 4(b) | 5(c) | 6(c) | 7(b) | 8(b) | 9(a) | 10(a) | 11(a) | 12(d) |
| Test # 24 | 1(d) | 2(a) | 3(a) | 4(a) | 5(c) | 6(d) | 7(b) | 8(c) | 9(c) | 10(a) | 11(c) | 12(b) |
| Test # 25 | 1(a) | 2(d) | 3(c) | 4(a) | 5(c) | 6(c) | 7(c) | 8(c) | 9(b) | 10(b) | 11(c) | 12(a) |
| Test # 26 | 1(d) | 2(c) | 3(c) | 4(b) | 5(a) | 6(d) | 7(b) | 8(a) | 9(a) | 10(d) | 11(a) | 12(b) |
| Test # 27 | 1(b) | 2(b) | 3(a) | 4(c) | 5(d) | 6(d) | 7(b) | 8(c) | 9(d) | 10(a) | 11(b) | 12(b) |
| Test # 28 | 1(c) | 2(a) | 3(b) | 4(a) | 5(c) | 6(c) | 7(c) | 8(d) | 9(b) | 10(a) | 11(a) | 12(c) |
| Test # 29 | 1(c) | 2(c) | 3(d) | 4(d) | 5(d) | 6(a) | 7(a) | 8(b) | 9(d) | 10(d) | 11(c) | 12(b) |
| Test # 30 | 1(b) | 2(c) | 3(b) | 4(c) | 5(a) | 6(c) | 7(b) | 8(a) | 9(d) | 10(b) | 11(c) | 12(c) |

| Test # 1 | Chapter # 10 | Gaseous Exchange | Time: 30 Min |
|---|---|---|---|

1- **Fill the box of correct answer in this manner that the ink is not come out from the box.** **(12)**

**(i) Point out the FALSE statement about respiration:**
(a) Gases can easily pass through the walls of the alveoli
(b) Gas exchange in lungs is very efficient because lungs provide large surface area
(c) In emphysema the walls of alveoli break and there is more surface area
(d) Dust particles can damage the lung by irritating the inner alveoli surface

**(ii) A disease involving the breakdown of air sacs of the lungs is:**
(a) Pneumonia (b) Bronchitis (c) Asthma (d) Emphysema

**(iii) Which process does NOT occur in the nasal cavity?**
(a) Trapping of large dust particles (b) Humidification of the inhaled air
(c) Warming of the inhaled air (d) Exchange of gases

**(iv) What type of blood vessels surrounds the alveoli?**
(a) Artery (b) Arteriole (c) Capillary (d) Vein

**(v) Which of the following respiratory disorders is caused by bacteria:**
(a) Asthma (b) Pneumonia (c) Bronchitis (d) Amphysema

**(vi) The length of trachea is ..... cm approximately.**
(a) 10 (b) 12 (c) 14 (d) 16

**(vii) Which disease is caused by streptococcus pneumoniae?**
(a) Bronchoitis (b) Amphysema (c) Pneumonia (d) Asthma

**(viii) Total chemicals in tabacco smoke are:**
(a) 1000 (b) 2000 (c) 3000 (d) 4000

**(ix) Rate of breathing depends upon concentraion of which gas in the blood:**
(a) Oxygen (b) Carbon dioxide (c) Nitrogen (d) Hydrogen

**(x) What type of blood vessels surrounds the alveoli?**
(a) Artery (b) Arteriole (c) Capillary (d) Vein

**(xi) Which gas is absorbed through stomata of plants during night?**
(a) Carbon dioxide (b) Oxygen (c) Nitrogen (d) Hydrogen

**(xii) Percentage of Carbon dioxide in the exhaled air is:**
(a) 4% (b) 5% (c) 6% (d) 7%

2- **Write short answers of the following questions.** **(18)**



(i) What is Asthma? Write its symptoms.
(ii) What is Larynx? Wrtie its function.
(iii) Write two bad effects of Smoking.
(iv) What are the symptoms of Bronchitis?
(v) How do stomata function during day and night?
(vi) What is pneumonia? Write down its symptoms.
(vii) How arteriosclerosis is caused?
(viii) What is bronchitis?
(ix) Write functions of hairs and mucus in the nose.

| Test # 2 | Chapter # 10 | Gaseous Exchange | Time: 30 Min |
|---|---|---|---|

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Glottis is the opening of:**
(a) Pharynx (b) Larynx (c) Trachea (d) Epiglottis

**(ii) What type of blood vesssels surrounds the alveoli:**
(a) Artery (b) Arteriole (c) Capillary (d) Vein

**(iii) Which brings deoxygerated blood from heart into the lungs?**
(a) Pulmonary vein (b) Pulmonary Artery (c) Aorta (d) Wind pipe

**(iv) Glottis is a narrow opening at the floor of:**
(a) Nasal cavity (b) Nostril (c) Pharynx (d) Larynx

**(v) The cavity in which lungs are located is called:**
(a) Thoracic cavity (b) Oral cavity (c) Buccal cavity (d) Abdominal cavity

**(vi) The muscles of ribs are called:**
(a) Smooth muscles (b) Cardiac muscles (c) Intercostal muscles (d) Costal muscles

**(vii) The process of gaseous exchange involves:**
(a) Breakdown of C-H bonds to yield energy (b) Physical movement that take air in and out of body
(c) Getting oxygen from the air and removing carbon dioxide
(d) Transport of oxygen by the blood to different parts of the body

**(viii) Most of the gaseous exchange in a leaf occurs through:**
(a) Stromata (b) General surface (c) Cuticle (d) Lenticels

**(ix) How many bronchi are there in the air passageway?**
(a) One (b) Two (c) Many (d) None

**(x) Where does the gaseous exchange occur in humans?**
(a) Pharynx (b) Trachea (c) Bronchi (d) Alveoli

**(xi) Which structure actively helps in taking the air out of lungs?**
(a) Nasal cavity (b) Bronchus (c) Bronchiole (d) Diaphragm

**(xii) The primary chemical stimulus for breathing is the concentration of:**
(a) Carbon dioxide in blood (b) Oxygen in blood
(c) Carbon dioxide in muscles (d) Oxygen in muscles

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**2- Write short answers of the following questions. (18)**

(i) Write four symptoms of respiratory disorder Amphysema.
(ii) What is windpipe or trachea? Describe its structure.
(iii) How passive smoking can be injurious to health?
(iv) Differentiate between breathing and cellular respiration.
(v) What are pleural membranes? What is function of fluid present between pleural membranes?
(vi) Differentiate between stomata and lenticels.
(vii) What are lungs?
(viii) Define Epiglottis. Write its function.
(ix) What is difference between inhalation and exhalation?

| Test # 3 | Chapter # 11 | Homeostasis | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) What waste products are exretecd by kidneys?**

(a) Urea, water & salts　(b) Salts, water and carbon dioxide
(c) Urea & water　(d) Urea & salts

**(ii) The two main functions of sweat are:**

(a) To keep the body cool and to remove excess proteins　(b) To keep the body warm and to filter the blood
(c) To filter the blood and to remove waste products　(d) To remove waste products and to cool the body

**(iii) Which would NOT be present in the filtrate entering the Bowman's capsule of nephron?**

(a) Water　(b) Calcium ions　(c) Blood cells　(d) Urea

**(iv) During peritoneal dialysis the waste materials move from:**

(a) The abdomen to the dialysis fluid　(b) The dialysis fluid to the peritoneum blood vessels
(c) The peritoneum blood vessels to the dialysis fluid　(d) The dialysis fluid to the abdomen

**(v) Plants which grow in arid environment are called:**

(a) Xerophytes　(b) Mosses　(c) Ferns　(d) Algae

**(vi) The maintenance of internal body temperature is called:**

(a) Osmore-gulation　(b) Thermore-gulation　(c) Excretion　(d) Digestion

**(vii) Approximate weight of a kidney is:**

(a) 10g　(b) 15g　(c) 20g　(d) 27g

**(viii) Secretions secreted by Conifers are called:**

(a) Resins　(b) Gums　(c) Latex　(d) Mucilage

**(ix) Secretion of rubber plant is called:**

(a) Gums　(b) Mucilage　(c) Latex　(d) Resins

**(x) Excretion of water through special pores present at the margin of leaves is called:**

(a) Evaporation　(b) Guttation　(c) Transpiration　(d) Sublimation

**(xi) Rubber plant excretes:**

(a) Resin　(b) Mucilage　(c) Latex　(d) Rubber

**(xii) The core temperature of human body remains at about:**

(a) $37^{o}C$　(b) $38^{o}C$　(c) $39^{o}C$　(d) $40^{o}C$

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**2- Write short answers of the following questions. (18)**

(i) How process of filtration takes place in kindey?
(ii) Define homeostasis. Give an example.
(iii) What is kidney transplant?
(iv) Define nephron and write down the names of its parts.
(v) What does dialysis mean? Name its methods?
(vi) What is renal tubules?
(vii) What is peritoneal dialysis?
(viii) Differentiate between 'Hydrophytes' and 'Xerophytes'.Give one example for each.
(ix) What is role of skin in controling temperature of body?

| Test # 4 | Chapter # 11 | Homeostasis | Time: 30 Min |
|---|---|---|---|

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Who is the writer of Encyclopeadia "Al-Tasrif".**
(a) Abu-Al-Qasim (b) Al-Farabi (c) Jabir-bin-Hayan (d) Aristotle

**(ii) Broad leaves with large number of stomata on the upperside are found in:**
(a) Xerophytes (b) Hydrophytes (c) Halophytes (d) Trees

**(iii) In an adult man the average urine formation in a day is:**
(a) 4 litre (b) 1.3 litre (c) 1.4 litre (d) 3 litre

**(iv) The functional unit of kidney is:**
(a) Glomerulus (b) Bowman's capsule (c) Loop of Henle (d) Nephron

**(v) Urine is temporarily stored in which of these until it is released from body.**
(a) Kidney (b) Ureter (c) Urinary bladder (d) Urethra

**(vi) Increases rate of reabsorption of water from nephrons.**
(a) Oxytocin (b) Vasopressin (c) Paratharmone (d) Glucagon

**(vii) The human urinary system consists of:**
(a) Rectum, lungs, kidneys, ureters (b) Kidneys, ureters, urinary bladder
(c) Skin, liver, lungs, kidneys (d) Kidneys, ureters, urinary bladder, urethra

**(viii) Which organ is responsible for filtering the blood?**
(a) Intestine (b) Brain (c) Stomach (d) Kidney

**(ix) The tube between kidney and urinary bladder is the:**
(a) Ureter (b) Urethra (c) Renal tubule (d) Nephron

**(x) 'Body balance' of water, salts, temperature and glucose is termed as:**
(a) Excretion (b) Tubular secretion (c) Homeostasis (d) Re-absorption

**(xi) Which is the correct order for the path taken by urine after it leaves the kidneys?**
(a) Urethra, bladder, ureters (b) Bladder, ureters, urethra
(c) Ureters, bladder, urethra (d) Bladder, urethra, ureters

**(xii) What is the function of the ureter?**
(a) To store urine (b) To carry urine from the kidney to the bladder
(c) To carry urine out of the body (d) To remove waste from the blood

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**2- Write short answers of the following questions. (18)**

(i) Differentiate between osmoregulation and thermoregulation.
(ii) What is lithotripsy method of removing stones from kidneys?
(iii) What is the size and weight of human kidney?
(iv) Write contribution of Abu Al-Qasim Al-Zahravi in biology.
(v) Differntiate between guttation and transpiration.
(vi) What are renal cortex and renal medula?
(vii) What do you mean by kidney stone?
(viii) What are Halophytes?
(ix) How kidneys work when there is shortage of water in body fluids?

| Test # 5 | Chapter # 12 | Coordination & Control | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) This is NOT a part of the hindbrain:**
(a) Pons (b) Medulla oblongata (c) Cerebrum (d) Cerebellum

**(ii) If you look at an intact human brain, what you see the most is a large, highly convoluted outer surface. This is the;**
(a) Cerebrum (b) Cerebellum (c) Pons (d) Medulla oblongata

**(iii) Insulin and glucagon are produced in the:**
(a) Hypothalamus (b) Anterior pituitary (c) Liver (d) Pancreas

**(iv) All of these are hormones except:**
(a) Insulin (b) Thyroxin (c) Glucagon (d) Pepsinogen

**(v) Lack of harmone somatotrophin causes disease:**
(a) Acromegaly (b) Dwarfism (c) Diabetes (d) Goiter

**(vi) How many types of nerves are classified on the basis of property of axons?**
(a) 2 (b) 3 (c) 4 (d) 5

**(vii) In a human eye, there are rods about...... lac.**
(a) 100 (b) 125 (c) 2300 (d) 225

**(viii) Effectors include:**
(a) Only muscles (b) Only glands
(c) Muscles and glands (d) Brain

**(ix) Which is responsible for puberty and voice pitch lowering in male?**
(a) Estrogen (b) Progestron (c) Testosteron (d) Glucagon

**(x) In some parts of the body many Neurons Cell bodies combine to make a group:**
(a) Nerves (b) Tissues (c) Ganglion (d) Muscles

**(xi) In Auditory Canal's wall special glands produce:**
(a) Wax (b) Blood (c) Auditory Fluid (d) Nerve impulse

**(xii) Which hormone is secreted in case of emergency situation:**
(a) Oxytocin (b) Thyroxin (c) Adrenaline (d) Calcitonin

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**2- Write short answers of the following questions. (18)**

(i) Define coordinators. Give an example also.
(ii) What is difference between Sensory Neurons and inter-Neurons?
(iii) Write disorders of eye.
(iv) What is the cause of Dwarfism?
(v) Define nerve. Differentiate betwen sensor and motor nerves.
(vi) What is meant by meninges of the brain? Write their two functions?
(vii) Write down five components of coordination action.
(viii) Define response and give an example.
(ix) Write down two important function of spinal cord.

| Test # 6 | Chapter # 12 | Coordination & Control | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Which type of coordination is found in plants?**
(a) Chemical coordination (b) Mechanical coordination
(c) Nervous coordination (d) Electrical coordination

**(ii) If a problem exists in the medulla oblongata of brain, which function of the body will be affected:**
(a) Intelligence (b) Pain (c) Heart beat (d) Thinking

**(iii) Which hormone causes contraction of uterus at the time of birth?**
(a) Thyroxin (b) Vasopressin (c) Oxytocin (d) Calcitonin

**(iv) Which part of human eye contains blood vessels?**
(a) Retina (b) Choroid (c) Iris (d) Pupil

**(v) Which neurons concucct impulses from CNS to effectors:**
(a) Motor (b) Inter (c) Sensory (d) Hormones

**(vi) Length of Spinal Cord is:**
(a) 20cm (b) 40cm (c) 60cm (d) 10cm

**(vii) Processes that carry nerve impulses away from the cell body are called:**
(a) Axons (b) Dendrites (c) Synapses (d) Myelin sheath

**(viii) The portion of the nervous system that is involuntary in action:**
(a) Somatic nervous system (b) Motor nervous system
(c) Autonomic nervous system (d) Sensory nervous system

**(ix) Which neurons are present inside the central nervous system?**
(a) Sensory neurons only (b) Motor neurons only
(c) Sensory and motor neurons both (d) Interneurons only

**(x) The part of the brain responsible for muscle movement interpretation of the senses and the memory is the:**
(a) Pons (b) Medulla oblongata (c) Cerebrum (d) Cerebellum

**(xi) A part from hearing what other major body function is performed by the ear?**
(a) Hormone secretion (b) Body balance
(c) Reduction in nerve pressure (d) All of these

**(xii) The myelin sheath is fromed by________, whishc warp around the axons of some neurons:**
(a) Nodes of Ranvier (b) Axons (c) Dendrites (d) Schwann cells

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**2- Write short answers of the following questions. (18)**

(i) How ears maintain the balance of body?
(ii) From where thyroxin harmone is secreted and what is its function?
(iii) What is paralysis? Write its two causes.
(iv) Write pupil reflex in dim and bright light.
(v) Define reflex action and reflex arc.
(vi) Write two functions of oxytocin harmone.
(vii) Differentiate between receptors and effectors.
(viii) State dendrites and their function.
(ix) What are aqueous and vitreous humour?

| Test # 7 | Chapter # 13 | Support & Movement | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) What do some bones produce?**
(a) Mucous (b) Hormones (c) Oxygen (d) Blood cells

**(ii) How would you define skeletal system?**
(a) All the bones in body
(b) All the muscles and tendons
(c) All the body's organs, both soft and hard tissues
(d) All the bones in body and the tissues that connect them

**(iii) Find the INCORRECT statement.**
(a) Bone is where most blood cells are made
(b) Bone serves as a storehouse for various minerals
(c) Bone is a dry and non-living supporting structure
(d) Bone protects and supports the body and its organs

**(iv) The purpose of rib cage is to:**
(a) Protect the stomach
(b) Protcet the spinal cord
(c) Protect the heart and lungs
(d) Provide an object to which the lungs can attach

**(v) The cells of cartilage are called:**
(a) Chondrocytes (b) Osteocytes (c) Collagen (d) Osteo clast

**(vi) Nose and larynx and made up of:**
(a) Hyaline cartilage
(b) Elastic cartilage
(c) Fibrous cartilage
(d) Bone

**(vii) Deposition of uric acid in joints is due to:**
(a) Osteoarthritis (b) Gout (c) Osteoporosis (d) Rheumatoid Arthritis

**(viii) An example of ball and socket joint is:**
(a) Elbow joint (b) Shoulder joint (c) Knee joint (d) Finger joint

**(ix) Which bone is part of Appendicular Skelton:**
(a) Skull (b) Vertebral column (c) Sternum (d) Pectoral / shoulder girdle

**(x) An example of immoveable joints is:**
(a) Joint of skull (b) Hip joint (c) Shoulder joint (d) Elbow joint

**(xi) Babies are born with soft bones:**
(a) 200 (b) 206 (c) 256 (d) 300

**(xii) Ball and Socket joints all movements is:**
(a) One direction (b) Two direction (c) All directions (d) No direction

---

**2- Write short answers of the following questions. (18)**

(i) Write down two disorders along with one reason of each of human Skeletal.
(ii) Define Hinge Joint and give one example.
(iii) Differentiate between compact bone to that of spongy bone.
(iv) Define joints. Also write its types.
(v) What are skeleton and endoskeleton?
(vi) What are biceps and triceps.
(vii) Define locomotion and movement.
(viii) State elastic and fibrous cartilage.
(ix) Define antagonists.

| Test # 8 | Chapter # 13 | Support & Movement | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) The interior of bone is soft and porous which is called:**
(a) Compact bone (b) Spongy bone (c) Bone marrow (d) Cartilage

**(ii) Vertebral column protects:**
(a) Heart (b) Spinal cord (c) Brain (d) Lungs

**(iii) An adult person skeleton has hard bones:**
(a) 406 (b) 306 (c) 206 (d) 106

**(iv) Mature bone cells are called.**
(a) Compact bone (b) Osteocytes (c) Cartilage (d) Fibrous cartilage

**(v) Tendons and ligaments are bands of:**
(a) Connective tissue (b) Muscular tissue
(c) Nerve tissue (d) Epidermal tissue

**(vi) Number of cranial bones in human skeleton is.**
(a) 22 (b) 14 (c) 8 (d) 33

**(vii) Find the ball-and-socket joint:**
(a) Joint in the finger bones (b) Joint of neck and skull bones
(c) Joint at elbow (d) Joint at pelvic girdle and leg bones

**(viii) All these are the parts of axial skeleton of humans except:**
(a) Ribs (b) Sternum (c) Shoulder girdle (d) Vertebral column

**(ix) The disorders in which there is an accumulation of uric acid in joints:**
(a) Gout (b) Rheumatoid arthritis (c) Osteoporosis (d) Osteo-arthritis

**(x) What is correct about tendons?**
(a) Tendons are flexible and they join muscles with bones
(b) Tendons are non-elastic and they join bones with bones
(c) Tendons are non-elastic and they join muscles with bones
(d) Tendons are flexible and they join muscles with muscles

**(xi) How many bones make our skull?**
(a) 14 (b) 22 (c) 24 (d) 26

**(xii) What are the main components of a bone?**
(a) Marrow, spongy bone, wax (b) Marrow, compact bone, wax
(c) Campact bone and marrow (d) Compact bone, spongy bone, marrow



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**2- Write short answers of the following questions. (18)**

(i) Write the names of bones of human appendicular skeleton.
(ii) What are tendons? What is their role in the body?
(iii) How osteo arthritis is different from rheumotoid arthritis?
(iv) Define ball and socket joint. Give one example also.
(v) What is the role of skeletal system in body?
(vi) Wrtie about structure of bone.
(vii) Define Cartilage. Write names of its two types.
(viii) Differentiate between origin and insertion of a Skeletal Muscle.
(ix) What are hinge joints? Write two examples.

| Test # 9 | Chapter # 14 | Reproduction | Time: 30 Min |
|---|---|---|---|

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) After fertilization in plants, the fruit develops from:**
(a) Ovule wall (b) Ovary wall (c) Petals (d) Anther

**(ii) Which part of the female reproductive system receives egg cells from the ovary?**
(a) Fallopian tube (b) Uterus (c) Vagina (d) Cervix

**(iii) Inside testes the sperms are produced in:**
(a) Vas deferens (b) Sperm duct (c) Seminiferous tubules (d) Collecting ducts

**(iv) Which of these cells has haploid number of chromosomes?**
(a) Spermatogonium (b) Primary spermatocyte (c) Secondary spermatocyte (d) All ot these

**(v) In which of the following asexual reproduction methods an organism divides into two:**
(a) Regeneration (b) Budding (c) Binary fission (d) Fragmentation

**(vi) Which of the following structures present in the pollen tube after pollination:**
(a) Tube nucleus and two sperms (b) Tube nucleus and one sperms
(c) Two tube nuclei and one sperm (d) Two tube nuclei and two sperms

**(vii) A process in which genetic material of one generation is transmitted to next is known as:**
(a) Reproduction (b) Respiration (c) Reduction (d) Circulation

**(viii) Binary fission is seen in:**
(a) Yeast (b) Planaria (c) Hydra (d) Corals

**(ix) From which part of the embryo root is formed?**
(a) Plumule (b) Cotyledons (c) Radicle (d) Epicotyle

**(x) The main method of reproduction in sponges, hydra and corals is:**
(a) Fragmentation (b) Spores (c) Regeneration (d) Budding

**(xi) Ovary change into after ripen:**
(a) Into seed (b) Into fruit (c) Into flower (d) Into nectar

**(xii) Sperms and fluid collectively called:**
(a) Hormones (b) Semen (c) Follicle (d) Scrotum

---

**2- Write short answers of the following questions. (18)**

(i) Define alternation of generation in plants.
(ii) What is the difference between cutting and grafting?
(iii) Differentiate between epigeal and hypogeal germination.
(iv) Define multiple fission and give an example.
(v) Define Budding and give an example.
(vi) What are asexual and sexual reproduction?
(vii) Define placenta.
(viii) What is seed coat? Write its function.
(ix) Write two conditions necessary for seed germination.

| Test # 10 | Chapter # 14 | **Reproduction** | Time: 30 Min |
|---|---|---|---|

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) In which of the following animals groups, external fertilization takes place:**
(a) Reptiles (b) Amphibians (c) Birds (d) Mammals

**(ii) Pollen grains are produced in another of flower by:**
(a) Meiosis (b) Mitosis (c) Binary fission (d) Multiple fission

**(iii) If a new born baby feeds on mother's milk, as a result of which productio of mother's milk will:**
(a) Decrease (b) Increase (c) Stop (d) Continue with intervals

**(iv) Tulips reproduce by ............:**
(a) Natual vegetative propagation (b) Artificial vegetative propagation
(c) Cutting (d) Grafting

**(v) A sexual reproduction is yeast takes place by..........:**
(a) Budding (b) Fragmentation (c) Binary fission (d) Spore formation

**(vi) Which plant reproduces by stem tubers?**
(a) Onion (b) Garlic (c) Potato (d) Ginger

**(vii) Growing an entire new plant from part of the original plant is called:**
(a) Budding (b) Regeneration (c) Fragmentation (d) Vegetative propagation

**(viii) Rhizopus reproduces asexually by:**
(a) Binary fission (b) Budding (c) Spore formation (d) Endospore formation

**(ix) A corm develops into new garlic plant. This is the process of:**
(a) Vegetative propagation (b) Regeneration
(c) Meiosis (d) Gametogenesis

**(x) Which is NOT an advantage of grafting?**
(a) The graft is identical to the parent plant (b) Grafting allows the propagation of seedless fruits
(c) The graft combines the characteristics of two plants
(d) Grafting may allow for the faster production of desirable fruits

**(xi) Pollination is the transfer of pollens from:**
(a) Anther to stigma (b) Stigma to anther (c) Sepal to petal (d) Petal to sepal

**(xii) Double fertilization in plants means:**
(a) Fusion of two sperms with two egg cells
(b) Fusion of one sperm with egg cell and other sperm with fusion nucleus.
(c) Fusion of tube nucleus with fusion nucleus and sperm with egg cell
(d) Fusion of tube nucleus with fusion nucleus and sperm with egg cell.



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**2- Write short answers of the following questions. (18)**

(i) What are endospores? Write names of two types of bacteria which forms such spores.
(ii) How new plants are produced by grafting? Give one example.
(iii) Define stem tuber. Give two examples.
(iv) Define two types of pollination.
(v) What is the difference between regeneration and binary fission? Give example.
(vi) How vegetative propagation take place by leaf?
(vii) Describe the process of spore formation in "Rhizopus".
(viii) What is Semen? Name two glands which pour their secretions into it.
(ix) Define Tissue Culture and Cloning.

| Test # 11 | Chapter # 15 | Inheritance | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) A purple-flowered pea plant has the genotype PP. Which of the following statements about this plant is FALSE?**

(a) Its phenotype will be white flowers (b) It has a homozygous dominant genotype
(c) When bred to a white-flowered plant all offspring will be purple flowered
(d) All the gametes produced will have the same flower colour allele.

**(ii) Charless Darwin proposed that organisms produce many more offspring than can possible survive on the limited amount of resources available to them. According to Darwin, the offspring that are most likely to survive are those that:**

(a) Are born first and grow fastest (b) Are largest and most aggressive
(c) Have no natural predators (d) Are best adapted to the environment

**(iii) If the genetype of a plant if Rr Yy, how many types of gamets can be formed?**

(a) 3 (b) 4 (c) 5 (d) 6

**(iv) Massenger RNA is produced by the process:**

(a) Transduction (b) Transpiration (c) Transcription (d) Translation

**(v) Dominant alleles are respresented by:**

(a) Small letters (b) Capital letters (c) Roman numbers (d) Numerical numbers

**(vi) On which vegetable, mendel carried out a large number of experiments:**

(a) Garden pea (b) Tomato (c) Potato (d) Cabbage

**(vii) How many pairs of homologous chromosomes are present in human body cells?**

(a) 22 (b) 23 (c) 24 (d) 25

**(viii) What will be the colour of flowers produced as a result of cross between red and white flowered 4 'O clock plants:**

(a) Pink (b) Red (c) White (d) Purple

**(ix) Which of the following genes will be termed as Homozygous Recessive:**

(a) RR yy (b) Rr Yy (c) Rr YY (d) rr yy

**(x) How many pea plants were used in the experiments of Mendel?**

(a) 28,000 (b) 29,000 (c) 26,000 (d) 27,000

**(xi) In monohybrid crosses, the ratio of the phenotypes was:**

(a) 9:3:3:1 (b) 3:1 (c) 9:4:3:0 (d) 4:0

**(xii) In the structure of DNA, Adenine of one nucleotide pairs with which of the nitrogenous base of opposite neucleotide?**

(a) Guanine (b) Cytosine (c) Thymine (d) Uracil

---

**2- Write short answers of the following questions. (18)**

(i) Define Trait. Write two human Traits.
(ii) Define Monohybrid and Dihybrid Cross.
(iii) Why Mendel selected pea plant for his experiments?
(iv) State Mendel's Law of Independent Assortment.
(v) Differentiate between Co-dominance and incomplete dominance.
(vi) Define the following. (i) Natural selection (ii) Artificial selection
(vii) State genetics.
(viii) Define discontinuous variation.
(ix) What are breeds and cultivars.

| Test # 12 | Chapter # 15 | **Inheritance** | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) If two plants having genotype "Rr" are crossed with each other, what percentage of newly produced plants will have genotype "rr"?**
(a) 25% (b) 50% (c) 75% (d) 100%

**(ii) Three alleles $I^A, I^B$ and *i* control human blood group. What is the blood group of a person having two alleles *ii* ?**
(a) Blood Group A (b) Blood Group B (c) Blood Group AB (d) Blood Group O

**(iii) Example of co-dominance is:**
(a) Blood group A (b) Blood group B (c) Blood group AB (d) Blood group O

**(iv) Term "artificial selection" was expressed by a Persian scientist:**
(a) Aristotle (b) Theophrastus (c) C.D. Buffon (d) Abu Rayhan Biruni

**(v) It is a genetic material:**
(a) DNA (b) RNA (c) t.RNA (d) r.RNA

**(vi) James Watson and Francis Crick proposed the structure of DNA in:**
(a) 1953 (b) 1963 (c) 1933 (d) 1922

**(vii) An organism's expressed physical trait, such as seed colour or pod shape is called its:**
(a) Genotype (b) Phenotype (c) Karyotype (d) Physical type

**(viii) An organism has two different alleles for a single trait, its genotype is said to be:**
(a) Homozygous (b) Heterozygous (c) Hemizygous (d) Homologous

**(ix) In the cross-pollination between a true-breeding yellow pod plant and a true-breeding green pod plant, where green pod colour is dominant, the resulting offsprings (F1 generation) will be:**
(a) 1/4 green, 3/4 yellow (b) All yellow
(c) 1/4 yellow, 3/4 green (d) All green

**(x) How many genetically different kinds of gametes an individual with genotype AAbb can produce?**
(a) 1 (b) 2 (c) 4 (d) 8

**(xi) Which of the following statements regarding genes in FALSE?**
(a) Genes are located on chromosomes (b) Genes consist of long sequence of DNA
(c) A gene contains information for the production of a protein
(d) Each cell contains a single copy of every gene

**(xii) Mendel's primary contribution to our understanding of inheritance was:**
(a) The idea the genes are found on chromosomes (b) Explanation of the patterns of inheritance
(c) The discovery of alleles
(d) Determining the informations contained in DNA are for protein synthesis

✂------------------------------------------------------------------------------------------

**2- Write short answers of the following questions. (18)**

(i) Define alleles. Give one example.
(ii) What will genotype and phenotype of plants produced as a result of cross between a true breed round seeded plant and true breed wrinkled seeded plant?
(iii) Describe two main sources of variations in population.
(iv) What is meant by homologous chromosomes? How many such pairs are present in human body cell?
(v) How do variations bring about evolution? Describe briefly.
(vi) What is the difference between transcription and translation?
(vii) Define genotype and phenotype.
(viii) What is selective breeding? Give an example.
(ix) What will be Genotype of plants produced as a result of cross between two plants having Genotype Rr?

| Test # 13 | Chapter # 16 | Man & his Environment | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Organisms in the ecosystem that are responsible for the recycling of plant and animal wastes are:**
(a) Producers (b) Consumers (c) Decomposers (d) Competitors

**(ii) Which from of Nitrogen is taken by the producers of the ecosystem?**
(a) Nitrogen gas (b) Ammonia (c) Nitrites (d) Nitrates

**(iii) An example of exoparasite is:**
(a) Plasmodium (b) Cuscuta (c) Ascaris (d) Antamoeba

**(iv) A group of organisms of the same species living in a particular area is called:**
(a) Population (b) Community (c) Abiotic factor (d) Ecology

**(v) The type of smbiotic association in which one partner gets benefits while other is not benefited nor harmed, is called:**
(a) Commensalism (b) Mutualism (c) Paracitism (d) Predation

**(vi) More than normal denitrification change the richness of soil as:**
(a) Increase (b) Less (c) Bad (d) Finished

**(vii) An example of Carnivore plants is:**
(a) Rose plant (b) Mosses (c) Picther plant (d) Ferns

**(viii) It is the example of tertiary consumers:**
(a) Cattle (b) snake (c) Lion (d) Frog

**(ix) Which animal is a primary consumer?**
(a) Grass hopper (b) Frog (c) Lion (d) Fox

**(x) Which of the following animals is a tertiary consumer?**
(a) Deer (b) Owl (c) Larvae of butterfly (d) Rabbit

**(xi) Primary source of energy for all ecosystems is:**
(a) Electricity (b) Sun (c) Fire (d) Nutrients

**(xii) It is the example of Primary Consumers:**
(a) Cattle (b) Snake (c) Lion (d) Tiger

---

**2- Write short answers of the following questions. (18)**

(i) What is meant by Producers? If these are eliminated from Eco System, what will happen?
(ii) Write down two methods of Nitrogen Fixation.
(iii) Define Symbiosis. Give one difference between Mutualism and Commensalism.
(iv) Differentiate between Ecosystem and Biosphere.
(v) Define Food Chain. Give one example.
(vi) What are Biogeo - chemical Cycles?
(vii) Define Parasitism.
(viii) From where producers get their energy and in which form they store it?
(ix) Define food chain and food web.

| Test # 14 | Chapter # 16 | Man & his Environment | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Symbiosis in which both partners get benefit, is the example of:**
(a) Parasitism (b) Mutualism (c) Predation (d) Competition

**(ii) It is an example of secondary consumers:**
(a) Cattle (b) Snake (c) Lion (d) Tiger

**(iii) pH of acid rain is:**
(a) 2-3 (b) 3-4 (c) 3-5 (d) 3-6

**(iv) Inter-relationship between Organisms and environment is called:**
(a) Mycology (b) Physiology (c) Ecology (d) Morphology

**(v) Example of Ectoparasite is:**
(a) Ascaris (b) Entamoeba (c) Lice (d) Plasmodium

**(vi) Which are put in first trophic level?**
(a) Carnivores (b) Producers (c) Herbivores (d) Consummers

**(vii) Which of the following is the abiotic component of the ecosystem?**
(a) Producers (b) Herbivores (c) Carnivores (d) Oxygen

**(viii) When we eat onions our trophic level is:**
(a) Primary consumer (b) Secondary consumer
(c) Decomposer (d) Producer

**(ix) Identify correctly matched pair:**
(a) Rainfall- biotic factors in ecosystem (b) Global warming- formation of fossil fuels
(c) Renewable natural resource - air (d) Corn - secondary consumer

**(x) In the food chain tree ⟶ caterpillar ⟶ robin ⟶ hawk ⟶ coyote which is the secondary consumer?**
(a) Caterpillar (b) Robin (c) Hawk (d) Coyote

**(xi) In ecosystems, the flow of _____is one way while ___is/are constantly recycled:**
(a) Minerals, energy (b) Energy, minerals (c) Oxygen , energy (d) Glucose, water

**(xii) In the food chain "grass ⟶ rabbit ⟶ fox ⟶ bear ⟶ mushroom" how many types of decomposers are present?**
(a) 1 (b) 2 (c) 3 (d) 4

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**2- Write short answers of the following questions. (18)**

(i) Explain the limits of biosphere.
(ii) Draw a diagram to represent food web and write names of organisms in it.
(iii) Differentiate between Ammonification and Nitrification.
(iv) Define ecological pyramid.
(v) What is mutualism? Give an example.
(vi) What are intra specific and inter specific interactions?
(vii) Describe global warming.
(viii) What are the effects of global warming?
(ix) What is environment friendly fuels?

| Test # 15 | Chapter # 17 | Biotechnology | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) To preserve fruits, vegetables & pickles we add:**
(a) Water and yogurt (b) Salt and acid (c) Flour and salt (d) Onion and garlic

**(ii) An enzyme produced by genetically modified organisms used to break up blood clots is called:**
(a) Lipase (b) Amylase (c) Urokinase (d) Peptidase

**(iii) This product is used in the production of soaps.**
(a) Formic acid (b) Acrylic acid (c) Ethanol (d) Glycerol

**(iv) In the first step of glycolysis, one molecule of glucose is broken down into two molecules of _______:**
(a) Sitric acid (b) Lactic acid (c) Pyruvic acid (d) Formic acid:

**(v) A hormone produced by genetically modified organisms, used to cure cancer of brain and lungs, is:**
(a) Insulin (b) Thymosin (c) Thyroxin (d) Anti diuretic hormone

**(vi) Which one is fermented food?**
(a) Wheat flour (b) Powdered milk (c) Vitamins (d) Yogurt

**(vii) This acid is used in Electroplating:**
(a) Formic acid (b) Acrylic acid (c) Ethanol (d) Glycerol

**(viii) Insulin is used by patients of:**
(a) Hepatics (b) Cancer (c) AIDS (d) Diabetes

**(ix) The complete map of human genome was published in:**
(a) 2002 (b) 2004 (c) 2006 (d) 2008

**(x) This product is used in the production of vineger and beverages:**
(a) Formic acid (b) Acrylic acid (c) Ethanol (d) Glycerol

**(xi) When was the work on Genetic Engineering started:**
(a) 1930 (b) 1940 (c) 1944 (d) 1970

**(xii) Fungi used in alcoholic fermentation is called:**
(a) *Saccharomyces cervisiae* (b) Basidio-myceter
(c) Zygomycetes (d) Algin

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**2- Write short answers of the following questions. (18)**

(i) Define biotechnology and also give its two uses.
(ii) Write two advantages of using Fermenters.
(iii) Write two uses of glycerol.
(iv) Define glycolysis and name its product.
(v) Write down name of four products prepared through genetic engineering.
(vi) Define alcohlic and lactic acid fermentation.
(vii) Write down any two objectives of genetic engineering.
(viii) Write down any two main achievements of genetic engineering.
(ix) What is the role of fermentation in beverage products?

| Test # 16 | Chapter # 17 | Biotechnology | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | | | | | 5. | | | | | 9. | | | | |
| 2. | | | | | 6. | | | | | 10. | | | | |
| 3. | | | | | 7. | | | | | 11. | | | | |
| 4. | | | | | 8. | | | | | 12. | | | | |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) The process in which there is incomplete oxidation reduction of glucose is called:**
(a) Biotechnology (b) DNA technology (c) Genetic engineering (d) Fermentation

**(ii) The product used in printing is:**
(a) Formic acid (b) Acrylic acid (c) Ethanol (d) Glycerol

**(iii) The micro-organism used for formation of Farmic acid is.**
(a) Sacchromyces (b) Bacillus (c) Aspergillus (d) Cocci

**(iv) Bacterium (E-coli) which prepares human growth harmone was synthesized in:**
(a) 1977 (b) 1970 (c) 1910 (d) 1980

**(v) Insulin was prepared by inserting insulin gene in bacteria:**
(a) 1978 (b) 1980 (c) 1982 (d) 1984

**(vi) In Genetic Engineering, Plasmid is used as ______:**
(a) Vector (b) Endonucleases (c) Denitrification (d) Assimilation

**(vii) Find the correct match for the fermentation product and the organism involved:**
(a) Formic acid - Saccharomyces (b) Ethanol - Saccharomyces
(c) Ethanol - Aspergillus (d) Glycerol - Aspergillus

**(viii) Which one is NOT an objective of genetic engineering?**
(a) Production of cheese and yogurt by lactic acid bacteria
(b) Isolation of a particular gene or part of a gene
(c) Production of RNA and protein molecules (d) Correction of genetic defects in higher organisms



**(ix) Which of these is an anti-viral proteint?**
(a) Urokinase (b) Thymosin (c) Insulin (d) Interferon

**(x) The first step in genetic engineering is:**
(a) Growth of the genetically modified organism (b) Transfer of the Recombinant DNA into the host organism
(c) Isolation of the gene of interest (d) Insertion of a gene into a vector

**(xi) In Scotland, in 1997 what an embryologist Ian Wilmut produced from the body cell of an adult sheep?**
(a) Sheep (Dolly) (b) Goat (c) Cow (d) Buffalo

**(xii) Which organism is used in fermentation for the preparation of glycerol?**
(a) Aspergillus (b) Saccharomyces (c) Bacillus (d) Stretococcus

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**2- Write short answers of the following questions. (18)**



(i) Define fermentation. Write names of its two types.
(ii) By which bacteria formic acid is produced? Write two uses of formic acid.
(iii) What is recombinent DNA and how it is produced?
(iv) What is fermenter?
(v) What are the uses of ethanol?
(vi) Describe human genome project.
(vii) Write four industrial products prepared by fermentation.
(viii) How gene of interest is isolated in genetic engineering?
(ix) What is meant by Single Cell Protein? How are these produced?

| Test # 17 | Chapter # 18 | Pharmacology | Time: 30 Min |
|---|---|---|---|

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Sulfonamides affect bacteria in the following way:**

(a) Break the cell wall (b) Inhibit protein synthesis
(c) Stop the synthesis of new cell wall (d) Stop the synthesis of folic acid

**(ii) What is true about vaccines?**

(a) Protect against the future viral and bacterial infections
(b) Treat the existing bacterial infections only
(c) Treat existing infection and also protect against future infections
(d) Protect against viral infections only

**(iii) Cephalosporins is a group of antibiotics. Which part of bacterial cell is destroyed by these antibiotics.**

(a) Cell membrane (b) Cell wall (c) DNA (d) Cytoplasm

**(iv) Who presented the idea of sterile surgery for the first time?**

(a) Sir Alexander Fleming (b) Joseph Lister
(c) Thomas Grill (d) Lamarck

**(v) Medicines which kill or stop the growth of bacteria are called:**

(a) Antibiotics (b) Analgesic (c) Antibodies (d) Antinarcotics

**(vi) Which of the following diseases is cured by vaccines?**

(a) Diabetes (b) Hepatitis B (c) Cancer (d) AIDS

**(vii) Antibiotics inhibit or kill the:**

(a) Worms (b) Viruses (c) Bacteria (d) Yeast

**(viii) Expired drugs cause damage to:**

(a) Heart (b) Lungs (c) Kidneys (d) Stomach

**(ix) Joseph Lister introduced an acid to sterile the surgical instruments and to clean wounds:**

(a) Carbonic acid (b) Acetic acid (c) Nitric acid (d) Carbolic acid

**(x) The number of drug addicts in Pakistan is currently estimated to be about:**

(a) 1000,000 (b) 800,000 (c) 600,000 (d) 500,000

**(xi) Reduce the possibility of infections on skin:**

(a) Analgesics (b) Antibiotics (c) Disinfectants (d) Antiseptics

**(xii) Dengue fever is a /an ______ infection.**

(a) Viral (b) Bacterial (c) Fungal (d) Algal

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**2- Write short answers of the following questions. (18)**

(i) From which Morphine and Digitalis is obtained?
(ii) Define narcotics and give examples.
(iii) Write a short note on discovery of vaccines.
(iv) Differentiate between Disinfectants and antiseptics.
(v) What is contribution of Joseph Lister in biology?
(vi) Write four precautions before taking medicines?
(vii) Define pharmacology and pharmacologist.
(viii) Which micro organism is killed by cephalosporins? Name two diseases for which these are sued.
(ix) What is use of powder silver nitrate?

| Test # 18 | Chapter # 18 | Pharmacology | Time: 30 Min |
|---|---|---|---|

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Streptomycin is obtained from.**
(a) Fungi (b) Algae (c) Bacteria (d) Fox glove

**(ii) Dengue virus attacks on:**
(a) White cells (b) Red cells (c) Platelets (d) Brain

**(iii) Psilocin is obtained from.**
(a) Algae (b) Funaria (c) Bacteria (d) Mushroom

**(iv) According to UNAID 0.1% of adult population of Pakistan has disease.**
(a) Hepatitus (b) AIDS (c) Polio (d) T.B

**(v) Diazepam is a type of drug:**
(a) Analgesics (b) Antibiotics (c) Sedatives (d) Vaccines

**(vi) Drug (medicine) derived from Minerals:**
(a) Morphine (b) Aspirin (c) Antitoxins (d) Tincture of Iodine

**(vii) Antibiotics are used for the:**
(a) Treatment of viral infections (b) Treatment of bacterial infections
(c) Immunization against infections (d) Both 'a' and 'b'

**(viii) The substances used for the treatment, cure, prevention or diagnosis of disease are called:**
(a) Medicinal drugs (b) Narcotics (c) Hallucinogens (d) Sedatives

**(ix) Aspirin is categorized as:**
(a) A drug from animals (b) A synthetic drug (c) A drug from plants (d) A drug from minerals

**(x) The drugs used to reduce pain are known as:**
(a) Analgesics (b) Antiseptics (c) Antibiotics (d) Sedatives

**(xi) Which of the following drugs is obtained from plants?**
(a) Aspirin (b) Opium (c) Cophalosporin (d) Insulin

**(xii) Which of these addictive drugs are also used as painkillers?**
(a) Narcotics (b) Sedatives (c) Hallucinogens (d) All can be used



**2- Write short answers of the following questions. (18)**

(i) Why vaccines are used? Write names of two diseases for which vaccines are used.
(ii) What is Marijuana? Describe its two effects.
(iii) Define pharmacology and pharamacy.

(iv) What are antibiotics? Give example.
(v) What are synthetic drugs? Give Examples.
(vi) How Edward Jenner made the use of vaccine in 1796?
(vii) Define Drug. Name one synthetic Drug.
(viii) Write two functions of B-Lymphocytes.
(ix) Differentiate between medicinal drug and addictive drug.

| Test # 19 | Chapter # 10, 11 | Gaseous Exchange To Homeostasis | Time: 30 Min |
|---|---|---|---|

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Intake of oxygen from environment and removal of carbon dioxide is called.**
(a) Cellular respiration (b) Excretion (c) Secretion (d) Gaseous exchange

**(ii) Every year "World No Tobacco Day" is celeberated on:**
(a) 31 May (b) 30 May (c) 31 March (d) 21 March

**(iii) Venules combine to form:**
(a) Vein (b) Pulmonary Artery (c) Trachea (d) Pulmonary Vein

**(iv) Stomata are present in:**
(a) Epidermis (b) Endodermis (c) Xylem (d) Phloem

**(v) Cigarette smoke contains at least ____ carcinogen.**
(a) 30 (b) 50 (c) 70 (d) 90

**(vi) In normal condition human respiration rate is:**
(a) 12 to 15 (b) 15 to 20 (c) 10 to 12 (d) 16 to 20

**(vii) The length of human kidney is:**
(a) 10 cm (b) 5 cm (c) 4 cm (d) 27 cm

**(viii) Ribs which protect the kidneys are:**
(a) First two (b) Last two (c) Middle (d) Last four

**(ix) In every kidney no. of Nephrons is about:**
(a) 10 Lac (b) More than 10 Lac (c) More than 5 Lac (d) 5 Lac

**(x) Method for the removal of kidney stones is:**
(a) Biopsy (b) Lithotripsy (c) Dialysis (d) Kidney transplant

**(xi) A thick muscular layer beneath lungs is called:**
(a) Kidney (b) Diaphragm (c) Bladder (d) Ureter

**(xii) Renal Pelvis is a part of:**
(a) Kidney (b) Heart (c) Lungs (d) Testes

---

**2- Write short answers of the following questions. (18)**

(i) Describe the changes which take palce during inspiration or inhalation in the chest cavity.
(ii) What is lungs cancer? Give its two causes.
(iii) Write the structure and function of Alveolus.
(iv) What is meant by gaseous exchange? Also define breathing.
(v) Write down the name of chemicals found in cigarette smoke cause cancer.
(vi) Which problems can exist after kidney transplant in human?
(vii) What is Haemodialysis?
(viii) Which part of kidney is renal pelvic? What is made from it?
(ix) Describe two major causes of kidney failure.

| Test # 20 | Chapter # 10, 11 | Gaseous Exchange To Homeostasis | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Beneath the Larynx in human neck, name of the gland is:**
(a) Parathyroid (b) Thyroid (c) Adrenal (d) Pancreas

**(ii) Percentage of Oxygen in inhaled air during breathing is:**
(a) 21 % (b) 79 % (c) 04 % (d) 0.04 %

**(iii) Is effective against brain and lungs cancer:**
(a) Beta Endorphin (b) Interferon (c) Thymosin (d) Urokinase

**(iv) Percentage of oxygen in expired air is:**
(a) 16 % (b) 21 % (c) 79 % (d) 30 %

**(v) Number of Ribs in man are:**
(a) 10 pairs (b) 12 pairs (c) 20 pairs (d) 22 pairs

**(vi) Gaseous exchange in cow takes place in:**
(a) Bronchi (b) Trachea (c) Pharynx (d) Alveoli



**(vii) The maintenance of water, salts, glucose and temperature in the body is called as:**
(a) Filteration (b) Excretion (c) Homeostasis (d) Reabsorption

**(viii) During lithotripsy stone is removed by:**
(a) Surgery (b) Medicines
(c) Electrical shock waves (d) Non electrical shock waves

**(ix) The concave part of the kidney is towards:**
(a) Upper (b) Lower
(c) Toward vertebral column (d) Away from vertebral column

**(x) As per normal chemical composition the amount of water in the urine is:**
(a) 60% (b) 70% (c) 80% (d) 95%

**(xi) Example of Hydrophyte plants is:**
(a) Water lily (b) Cactus (c) Sea grass (d) Grass

**(xii) The organ that filters the blood:**
(a) Intestine (b) Stomach (c) Kidney (d) Brain

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**2- Write short answers of the following questions. (18)**

(i) Write down the function of alveoli.
(ii) What is meant by respiratory centre.
(iii) What is the percentage of Nitrogen in exhaled and inhaled air?
(iv) What is the percentage of carbon dioxide in exhaled and inhaled air?
(v) Define and give the function of diaphragm.
(vi) How plants remove extra carbon dioxide?
(vii) What role is played by lungs in homeostasis?
(viii) Write osmoregulatory function of kidney.
(ix) Write the names of different parts of human Urinary System.

| Test # 21 | Chapter # 12, 13 | Coordination & Control To Support & Movement | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Which part of middle ear separates it from inner ear.**

(a) Stapes (b) Incus (c) Malleus (d) Oval window

**(ii) Parathyroid glands secretes hormone, is called:**

(a) Calcitonin (b) Thyroxin (c) Parathormone (d) Epinephrine

**(iii) The parts of forebrain are:**

(a) Thalamus, medulla and pons (b) Thalamus, hypothalamus and cerebrum
(c) Thalamus, hypothalamus and cerebellum (d) Medulla, cerebellum and pons

**(iv) The Cochlea is present in:**

(a) External Ear (b) Middle Ear (c) Internal Ear (d) None of these

**(v) Which disease is not related to lungs:**

(a) Asthma (b) Emphysema (c) Myopia (d) Pneumonia

**(vi) When the human body has low amount of water, then Pituitary Gland secrets:**

(a) Vessopressin (b) Insulin (c) TSH (d) Oxytocin

**(vii) Example of hinge joints is:**

(a) Elbow joint (b) Hip joint (c) Shoulder joint (d) Joints between the vertebrae

**(viii) Number of bones in both feet is:**

(a) 108 (b) 126 (c) 22 (d) 56

**(ix) Number of bones in Appendicular Skeleton is:**

(a) 120 (b) 126 (c) 56 (d) 108

**(x) Which one of the following have exoskeleton.**

(a) Arthropods (b) Birds (c) Mammals (d) Reptiles

**(xi) Number of bones in upper Jaw is:**

(a) Two (b) Three (c) Ten (d) Fourteen

**(xii) The cartilage found in intervertebral discs is:**

(a) Hyaline (b) Fibrous (c) Matrix (d) Elastic

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**2- Write short answers of the following questions. (18)**

(i) Differentiate between somatic nervous system and autonomic nervous system.
(ii) What is hypothalamus? Write down its function.
(iii) Write down the names of parts of internal ear.
(iv) What is myelin sheath?
(v) Write down function of parathyroid gland?
(vi) Describe Osteocytes.
(vii) What is difference between hyaline cartilage and elastic cartilage?
(viii) What is meant by arthritis. How it can be treated?
(ix) What are the types of connective tissues?

| Test # 22 | Chapter # 12, 13 | Coordination & Control To Support & Movement | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Part of brain that co-ordinates muscle movements:**
(a) Cerebellum (b) Pons (c) Medulla Oblongata (d) Hypothalamus

**(ii) Disease caused by deficiency of iodine in food is called:**
(a) Diabetes mellitus (b) Hyper-thyroidism (c) Dwarfism (d) Goiter

**(iii) Hypermatropia is also called:**
(a) Long sight (b) Short sight (c) Myopia (d) Night blindness

**(iv) The number of lobes in right lung is:**
(a) 1 (b) 2 (c) 3 (d) 4

**(v) Who described 130 diseases of eye?**
(a) Ali Ibne Sena (b) Newton (c) Jabbir Bin Hyyan (d) Ali Bin Mussa

**(vi) Which one controls rage, pain, pleasure and sorrow?**
(a) Cerebellum (b) Medulla (c) Hypothalamus (d) Midbrain

**(vii) Elastic cartilage is found in:**
(a) Larynx (b) Trachea (c) Bronchial tubes (d) Epiglottis

**(viii) Sternum is a bone of_____:**
(a) Leg (b) Chest Bone (c) Cranium (d) Hand

**(ix) Cartilagenous cells are called.**
(a) Chondrocytes (b) Osteocytes (c) Leucocytes (d) Erthrocytes

**(x) The smallest bone of human body is:**
(a) Stapes (b) Incus (c) Malleus (d) Vertebra

**(xi) The biggest bone of our body is found in______.**
(a) Thigh (b) Hand (c) Leg (d) Waist

**(xii) Outer hard layer of bone is called:**
(a) Compact Bone (b) Spongy Bone (c) Cartilage (d) Osteosite

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**2- Write short answers of the following questions. (18)**

(i) What is epilepsy?
(ii) What is the cause of diseases 'Hypothyroidism' and 'Hyperthyroidism'. write two symptoms for each.
(iii) Compare the functions of hormones "Insulin" and "Glucagon".
(iv) Write the names and effects of hormoness secreted by testes and ovaries.
(v) Differentiate between structure and function of sensory neurons and motor neurons.
(vi) What is osteoporosis? Give at least one reason for this disease.
(vii) Differentiate between Gout and Osteoarthritis.
(viii) What are Flexor and Extensor?
(ix) What is the similarity between bone and cartilage.

| Test # 23 | Chapter # 14, 15 | Reproduction To Inheritance | Time: 30 Min |
|---|---|---|---|

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Amoeba is reproduced asexualy by:**
(a) Budding (b) Binary fission (c) Fragmentation (d) Spore formation

**(ii) Which of the cells of ovary have diploid number of chromosomes?**
(a) Oogonia (b) Secondary oocytes (c) First polar body (d) Egg cell

**(iii) Individual units of corolla are:**
(a) Carpels (b) Petals (c) Stamens (d) Sepals

**(iv) Microspores are produced by:**
(a) Mitosis (b) Meosis (c) Fission (d) Budding

**(v) Rhizopus reporducs Asexually by:**
(a) Binary fission (b) Budding (c) Spore formation (d) Endospore formation

**(vi) Ginger reproduce by:**
(a) Bulbs (b) Corns (c) Rhizomes (d) Stem tubers

**(vii) Darwin proposed the Theory of:**
(a) Special creation (b) Natural selection
(c) Use and disuse of organs (d) Mutation

**(viii) The allele which is not expressed in $F_1$ generation is:**
(a) Dominant (b) Recessive (c) Mutant (d) Selected

**(ix) The ratio of phenotype in the law of independent assortment is:**
(a) 9:3:3:1 (b) 9:3:2:2 (c) 9:3:1:3 (d) 9:3:1:4

**(x) Charles Darwin proposed the mechanism of organic evolution in:**
(a) 1838 (b) 1839 (c) 1840 (d) 1850

**(xi) These are the units of inheritance:**
(a) Genes (b) Alleles (c) Genotype (d) Phenotype

**(xii) Model of DNA structure was presented by:**
(a) Mendel (b) Watson (c) Crick (d) Watson & crick

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**2- Write short answers of the following questions. (18)**

(i) State radicle and plumule.
(ii) What is follicle?
(iii) What is germination?
(iv) Define fragmentation. Give an example.
(v) Write the names of parts of a flower.
(vi) Enlist the nitrogenous bases present in DNA double helix.
(vii) What is difference between homozygous genotype and heterozygous genotype?
(viii) Define Mendel's law of segregation.
(ix) Define artificial selection or selective breeding.

| Test # 24 | Chapter # 14, 15 | Reproduction To Inheritance | Time: 30 Min |
|---|---|---|---|

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Which one is artificles vegetative propagation:**
(a) Bulbs (b) Corms (c) Rhizomes (d) Grafting

**(ii) Pakistan's Federal Ministry of health established NACP in:**
(a) 1987 (b) 1988 (c) 1989 (d) 1990

**(iii) The outer most whorl of flower is called:**
(a) Calyx (b) Corolla (c) Androecium (d) Gynoecium

**(iv) Onion and tulips plants reproduce by:**
(a) Bulbs (b) Corms (c) Rhizomes (d) Stemtubers

**(v) Garlic reproduce by:**
(a) Bulbs (b) Rhizome (c) Corms (d) Stem tubers

**(vi) Vegetative propagation in mint takes place by:**
(a) Rhizome (b) Corms (c) Leaves (d) Suckers

**(vii) Scientist who developed law of segregation:**
(a) John Methew (b) Gregor Mendel (c) RC Punnett (d) Cahrles Darwin

**(viii) The branch of Biology in which we study about inheritance is called:**
(a) Microbiology (b) Physiology (c) Genetics (d) Ecology

**(ix) Sources of variations in the Organisms are:**
(a) Crossing over (b) Mutation (c) Both A and B (d) Mitosis

**(x) Genotype in which Gene pair contains two identical alleles is called:**
(a) Homozygous (b) Heterozygous (c) Hemizygous (d) Homologous

**(xi) The anti-evolution idea is called:**
(a) Breeding theory (b) Special evolution theory
(c) Theory of special creation (d) Darwinism

**(xii) Alternate form of gene is called:**
(a) Translation (b) Allele (c) Genotype (d) Phenotype

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**2- Write short answers of the following questions. (18)**

(i) Define parthenogenesis.
(ii) How spermatids change into sperms?
(iii) What is Embryo? Write its parts.
(iv) Differentiate between Internal and External Fertilization.
(v) What is Oogenesis?
(vi) What is difference between dominant allele and recessive allele?
(vii) Define gene. How many genes are present in one chromosome?
(viii) What is Theory of Special Creation?
(ix) Write two points of Watson-Crick Model of DNA.

| Test # 25 | Chapter # 16, 18 | Man & his Environment To Pharmacology | Time: 30 Min |
|---|---|---|---|

1- **Fill the box of correct answer in this manner that the ink is not come out from the box.** **(12)**

**(i) It is a perfect cycle in the sense that is returned to atmosphere as soon as it is removed.**
(a) Carbon cycle (b) Nitrogen cycle (c) Water cycle (d) Oxygen cycle

**(ii) Biotic component of an ecosystem is.**
(a) Producer (b) Consumer (c) Decomposer (d) Light

**(iii) Flower of which plant is pollinated by wind.**
(a) Rose (b) Sunflower (c) Grass (d) Butter cup

**(iv) Conversion of Nitrates into Nitrogen gas is called:**
(a) Denitrification (b) Assimilation (c) Ammonification (d) Nitrogen Fixation

**(v) Vector DNA and Gene of interest, collectively called:**
(a) Gene (b) Recombinant Gene
(c) Recombinant DNA (d) GMO

**(vi) The main source of all types of Fermentation is:**
(a) Genes (b) Alleles (c) Micro-organism (d) Chromosomes

**(vii) Alcoholic fermentation is processed by:**
(a) Virus (b) Bacteria (c) Fungi (d) Algae

**(viii) The animal whose DNA has been changed is called:**
(a) Transformed (b) Transgenic (c) Monohybrid (d) Dihybrid

**(ix) Pathogens contain special proteins called:**
(a) Antigens (b) Antibodies (c) Antibiotics (d) Antiseptics

**(x) Mescaline is obtained from a plant:**
(a) Opium (b) Cactus (c) Maize (d) Brassica

**(xi) Medicine (drug) derived from animals.**
(a) Morphine (b) Aspirin (c) Antitoxins (d) Tincture Iodine

**(xii) A material which contain weekened pathogen is called:**
(a) Vaccin (b) Antigen (c) Bacillus (d) Sacchromyces

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2- **Write short answers of the following questions.** **(18)**

(i) Write a short note on assimilation.
(ii) How energy flows in an ecosystem?
(iii) Write any two effects of deforestation.
(iv) What are endonuclease and Ligase?
(v) Define genetic engineering.
(vi) Write four importance of biotechnology.
(vii) What are sephalosporins and tetracyclines?
(viii) Write difference between antigens and antibodies.
(ix) Define Sedatives and give examples.

| Test # 26 | Chapter # 16, 18 | Man & his Environment To Pharmacology | Time: 30 Min |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) The base of food chain is always a:**
(a) Animal (b) Sun (c) Bacteria (d) Plant

**(ii) Which one is not biotic factor.**
(a) Plants (b) Animals (c) Soil (d) Bacteria

**(iii) The host country of the greatest no. of refugees in the world is:**
(a) India (b) Canada (c) Pakistan (d) America

**(iv) To convert nitrogen gas into nitrate is called:**
(a) Denitrification (b) Nitrogen fixation
(c) Assimilation (d) Ammonification

**(v) The human genome project was started in:**
(a) 1990 A.D. (b) 1991 A.D. (c) 1992 A.D. (d) 1993 A.D.

**(vi) Alcoholic fermentation is carried out by:**
(a) Saccharomyces cerevisiae (b) Streptococcus
(c) Lactobacillus (d) Yeast

**(vii) Find the correct match for the fermentation product and the organism involved:**
(a) Formic acid - Saccharomyces (b) Ethanol - Saccharomyces
(c) Ethanol - Aspergillus (d) Glycerol - Aspergillus

**(viii) Which one is NOT an objective of genetic engineering?**
(a) Production of cheese and yogurt by lactic acid bacteria
(b) Isolation of a particular gene or part of a gene
(c) Production of RNA and protein molecules (d) Correction of genetic defects in higher organisms

**(ix) Drugs interact with Central Nervous System to depress its activities belong to the group of Drugs called:**
(a) Sedatives (b) Narcotics (c) Analgesics (d) Vaccines

**(x) Penicillin was discovered by:**
(a) Lamark (b) Darwin (c) Robert Hook (d) Alexander Fleming

**(xi) Edward jenner introduce vaccine of which disease?**
(a) Smallpox (b) AIDS (c) Hepatitis (d) Malaria

**(xii) Sir Alexander Fleming was awarded the Nobel Prize in:**
(a) 1940 (b) 1945 (c) 1950 (d) 1960



**2- Write short answers of the following questions. (18)**

(i) Differentiate between actoparasite and endoparasite.
(ii) Define population and community?
(iii) Where endoparasites live? Give one example.
(iv) What is gene therapy? Describe briefly?
(v) What is the function of restriction endonucleases?
(vi) Write short note on lactic acid fermentation.
(vii) Write about some drugs from plants and fungi.
(viii) Write effects of hallucinogens.
(ix) Why sedative drugs are used?

| Test # 27 | Chapter # 10 To 13 | FIRST HALF BOOK PAPER NO. 1 | Time: 1 Hour |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) For gaseous exchange the leaves and young stems have in their epidermis:**
(a) Stomata (b) Lenticels (c) Companion cell (d) Ground cells

**(ii) The chest wall is made up of ____ pairs of ribs.**
(a) 8 (b) 12 (c) 16 (d) 20

**(iii) The gas produced in mesophyll cells as by-product during day time is called:**
(a) Oxygen (b) Carbon dioxide (c) Nitrogen (d) Chlorin

**(iv) Plants store a large amount of water in their cells for:**
(a) Transpiration (b) Photosynthesis (c) Turgidity (d) Guttation

**(v) The human urinary system consists of:**
(a) Rectum, lungs, kidneys, ureters (b) Kidneys, ureters, urinary bladder
(c) Skin, liver, lungs, kidneys (d) Kidneys, ureters, urinary bladder, urethra

**(vi) Which organ is responsible for filtering the blood?**
(a) Intestine (b) Brain (c) Stomach (d) Kidney

**(vii) Which one is co-ordinator in nervous co-ordination?**
(a) Glands (b) Brain and spinal cord
(c) Brain (d) Spinal cord

**(viii) The function of effector is called.**
(a) Stimulus (b) Impulse (c) Response (d) Axon

**(ix) Round hole in the centre of Iris through which light passes is called.**
(a) Retina (b) Blind spot (c) Choroid (d) Pupil

**(x) Which of the following tissues join the muscles to the bones:**
(a) Tendons (b) Ligaments (c) Cartilage (d) Bone marrow

**(xi) The skeleton found outside the body is called:**
(a) Endoskeleton (b) Exoskeleton (c) Hydro - skeleton (d) Fibro - skeleton

**(xii) Some bones prepare:**
(a) Mucous (b) Blood cells (c) Oxygen (d) Hormones

✂------------------------------------------------------------

**2- Write short answers of the following questions. (20)**

(i) Write the causes and two symptoms of Emphysema. (ii) Write a short note on gaseous exchange in Plants.
(iii) Describe the role of "Bowman's Capsule" in the nephron.
(iv) Define thermoregulation and excretion. (v) What is meant by pressure filtration?
(vi) Describe the function of rods and cones present in the retina of eye.
(vii) What is function of parathormone? (viii) What is meant by Exoskeleton and Endoskeleton?
(ix) What is difference between tendons and ligaments. (x) Differentiate between Cartilage and Bone.

## SUBJECTIVE PART

☆ **Answers the following questions with detail. (18)**

3- **(a)** Explain two methods by which plants exchange their gases. (05)
**(b)** How kidney stone is formed and what is its treatment? (04)

4- **(a)** Describe the structure of neuron. (05)
**(b)** Explain three types of Joints. (04)

| Test # 28 | Chapter # 10 To 13 | FIRST HALF BOOK PAPER NO. 2 | Time: 1 Hour |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) The process of gaseous exchange involves:**
(a) Breakdown of C-H bonds to yield energy (b) Physical movement that take air in and out of body
(c) Getting oxygen from the air and removing carbon dioxide
(d) Transport of oxygen by the blood to different parts of the body

**(ii) Most of the gaseous exchange in a leaf occurs through:**
(a) Stromata (b) General surface (c) Cuticle (d) Lenticels

**(iii) How many bronchi are there in the air passageway?**
(a) One (b) Two (c) Many (d) None

**(iv) The tube between kidney and urinary bladder is the:**
(a) Ureter (b) Urethra (c) Renal tubule (d) Nephron

**(v) 'Body balance' of water, salts, temperature and glucose is termed as:**
(a) Excretion (b) Tubular secretion (c) Homeostasis (d) Re-absorption

**(vi) Which is the correct order for the path taken by urine after it leaves the kidneys?**
(a) Urethra, bladder, ureters (b) Bladder, ureters, urethra
(c) Ureters, bladder, urethra (d) Bladder, urethra, ureters

**(vii) Central nervous system include brain and:**
(a) Noto cord (b) Vertebra (c) Spinal cord (d) Heart

**(viii) No. of components of coordination process is:**
(a) 4 (b) 7 (c) 3 (d) 5

**(ix) The unit of Nervous system is:**
(a) Nucleus (b) Neuron (c) Receptors (d) Nephron

**(x) When uric acid accumulates in the joints, then the disease will be:**
(a) Gout (b) Rheumatoid arthritis
(c) Osteoporosis (d) Osteo arthritis

**(xi) Osteoporosis is a disease of:**
(a) Bones (b) Heart (c) Stomach (d) Brain

**(xii) The disorder in which uric acid crystal are accumulated in joints is:**
(a) Osteoarthritis (b) Rheumatoid arthritis
(c) Gout (d) Osteoporsis



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**2- Write short answers of the following questions. (20)**

(i) What is Nicotine?
(ii) Write down the importance of Trachea in the Respiratory Sytem.
(iii) What is tubular secretion?
(iv) What is difference between renal corpuscle and renal tubule?
(v) What is kidney failure and how it can be treated?
(vi) What are effectors? Give its two examples.
(vii) Define Stimuli and Response.
(viii) Define joint. Give one example of fixed and moveable joints.
(ix) Write four causes of osteoporosis.
(x) How many bones are present in Vertebral Column? Write the name of the biggest bone in human body.



## SUBJECTIVE PART

☆ **Answers the following questions with detail. (18)**

**3- (a)** What are the bad effects of smoking. Write in detail. (05)
**(b)** What is meant by kidney failure? Describe its causes. (04)

**4- (a)** Describe peripheral nervous system and its types with their functions. (05)
**(b)** How many types of antagonostic muscles are there and how they work? (04)

| Test # 29 | Chapter # 14 To 18 | SECOND HALF BOOK PAPER NO. 1 | Time: 1 Hour |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Male gonads are known as:**
(a) Spores (b) Ovaries (c) Testes (d) Egg cells

**(ii) Normally external fertilization occurs in:**
(a) In the body (b) Air (c) Water (d) All of these

**(iii) Fourth whorl of flower is:**
(a) Calyx (b) Corolla (c) Androecium (d) Gynoecium

**(iv) Albinism is a trait.**
(a) Co-dominant (b) Dominant (c) Heterozygous (d) Recessive

**(v) When did scientists become able to cut and unite DNA?**
(a) 1945 (b) 1924 (c) 1944 (d) 1970

**(vi) The types of inheritable variations are:**
(a) 2 (b) 3 (c) 4 (d) 5

**(vii) A recovery of one tonne of paper can save how many trees?**
(a) 17 (b) 170 (c) 200 (d) 100

**(viii) Bred plants are called:**
(a) Breeds (b) Cultivars (c) Carnivores (d) Herbivores

**(ix) The process in which there is incomplete oxidation reduction of glucose is called:**
(a) Biotechnology (b) DNA technology
(c) Genetic engineering (d) Fermentation

**(x) The product used in printing is:**
(a) Formic acid (b) Acrylic acid (c) Ethanol (d) Glycerol

**(xi) It affects the production of sperms in men and also weakens the short term memory.**
(a) Morphine (b) Psilocin (c) Marijuana (d) Caffeine

**(xii) Some drugs often make persons dependent on them, are called:**
(a) Sedative (b) Addictive (c) Antibiotic (d) Analgesics

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**2- Write short answers of the following questions. (20)**

(i) What is the full name of STD?
(ii) Define bulbs and corms.
(iii) What are advantages of artificial selection?
(iv) What is meant by Albinism.
(v) Differentiate between deforestation and afforestation.
(vi) What do you mean by eutrophication?
(vii) State alcoholic fermentation.
(viii) How gene is entered into a vector?
(ix) Write names of two types of antibiotics.
(x) Define Bactericidal and Bacteriostatic Antibiotics.

## SUBJECTIVE PART

☆ **Answers the following questions with detail. (18)**

**3- (a)** Discuss two types of artificial vegetative propagation. (05)
**(b)** Explain Mendel's law of independent assortment with an example. (04)

**4- (a)** Compare Parasitism to that of Mutualism. Give one example of each. (05)
**(b)** What is single cell protein. How it is produced and what is its importance. (04)

| Test # 30 | Chapter # 14 To 18 | SECOND HALF BOOK PAPER NO. 2 | Time: 1 Hour |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

**1- Fill the box of correct answer in this manner that the ink is not come out from the box. (12)**

**(i) Is not a part of carpel:**
(a) Ovary (b) Anther (c) Stigma (d) Style

**(ii) Ovary is ripened into:**
(a) Seed (b) Flower (c) Fruit (d) Sweethness

**(iii) There is a scar on seed coat of seed which is called:**
(a) Radical (b) Hilum (c) Integument (d) Plumule

**(iv) Genetics is the branch of biology in which we study.**
(a) Functions (b) Fossils (c) Inheritance (d) Evolution

**(v) Cytocine always makes pair with.**
(a) Guanine (b) Hydrogen (c) Adenine (d) Thymine

**(vi) 250 years ago, the population of world was approximately _______ millions.**
(a) 400 (b) 500 (c) 600 (d) 700

**(vii) All the ecosystem of the world together form the ______:**
(a) Population (b) Biosphere (c) Community (d) Habitat

**(viii) The human genome project was started in:**
(a) 1990 A.D. (b) 1991 A.D. (c) 1992 A.D. (d) 1993 A.D.

**(ix) Alcoholic fermentation is carried out by:**
(a) Saccharomyces cerevisiae (b) Streptococcus
(c) Lactobacillus (d) Yeast

**(x) Sir Alexander Fleming was awarded the Nobel Prize in:**
(a) 1940 (b) 1945 (c) 1950 (d) 1960

**(xi) Is prepared from opium:**
(a) Vaccine (b) Aspirin (c) Morphine (d) Paracetamol

**(xii) Medicines which induce sedation by reducing irritability and excitement are called:**
(a) Analgasics (b) Antibiotics (c) Sedactives (d) Vaccines

✂-----------------------------------------------------------------------

**2- Write short answers of the following questions. (18)**

(i) What is meant by spermatogenesis?
(ii) What do you know about micropyle?
(iii) What is difference between genes and alleles.
(iv) Define nucleosomes.
(v) What is the threat for Maldives due to oceans?
(vi) Differentiate between autotrophs and heterotrophs with an example.
(vii) What is vector in genetic engineering?
(viii) Write the uses of Formic acid and Acrylic acid in industry.
(ix) Define narrow spectrum and broad spectrum antibiotics.
(x) What is meant by "Social Stigma"?

## SUBJECTIVE PART

☆ **Answers the following questions with detail. (18)**

3- **(a)** Differentiate between continuous and discontinuous variations. (05)
**(b)** Explain different methods of nitrogen fixation. (04)

4- **(a)** Describe the scope and importance of biotechnology in the fields of food, agriculture and medicine. (05)
**(b)** Define vaccines with their importance. (04)

| Test # 31 | Chapter # 10 To 18 | FULL BOOK PAPER NO. 1 | Time: 2 Hour |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

***Time : 15 Min　　Objective Type　　Total Marks : 12***

**Note: You have four choics for each objective type question as A,B,C&D. The choice which you think is correct. Fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.**

| Q.1 | Questions | (A) | (B) | (C) | (D) |
|---|---|---|---|---|---|
| (i) | Cytosine always pair with: | Guanine | Thiamine | Adenine | Hydrogen |
| (ii) | Naturally found in graphite and diamond: | Nitrogen | Carbon | Oxygen | Hydrogen |
| (iii) | Is not a part of carpel: | Ovary | Anther | Stigma | Style |
| (iv) | Alcoholic fermentation is processed by: | Virus | Bacteria | Fungi | Algae |
| (v) | Stomata are frequently present on: | Upper side of leaf | Lower side of leaf | Both sides of leaf | Stem |
| (vi) | Alternate form of gene is called: | D.N.A | Gamete | Chromosome | Allele |
| (vii) | As per normal chemical composition the amount of water in the urine is: | 60% | 70% | 80% | 95% |
| (viii) | Ovary is ripened into: | Seed | Flower | Fruit | Sweethness |
| (ix) | In every 100 ml of human blood concentration of glucose is maintained as: | 180-200mg | 150-180mg | 100-150mg | 80-120mg |
| (x) | Some bones prepare: | Mucous | Blood cells | Oxygen | Hormones |
| (xi) | Is prepared from opium: | Vaccine | Aspirin | Morphine | Paracetamol |
| (xii) | The part of the brain responsible for muscle movement, interpretation of the senses and the memory is: | Cerebrum | Pons | Medulla oblongata | Cerebellum |



**Marks : 48　☆ Subjective (Part-I) ☆　Time: 01:45**

**2. Write short Answers of any five part. (5 × 2 = 10)**

(i) Define nasal cavity. (ii) Define vocal cords. (iii) Why does blood become thick due to smoking?
(iv) Define ligaments. (v) What are biceps and triceps?
(vi) Differentiate between flexor and externsor muscle.
(vii) Define predation with an example. (viii) What are the effects of global warming?

**3. Write short Answers of any five part. (5 × 2 = 10)**

(i) What are hydrophytes? Give an example. (ii) What is hillus? (iii) Define dialysis. Name its two types.
(iv) What is reproduction? Name its two basic types.
(v) What is difference between self polination and cross pollination?
(vi) What is vector in genetic engineering? (vii) What is meant by single cell protein?
(viii) What is meant by gene therapy?



**4. Write short Answers of any five part. (5 × 2 = 10)**

(i) What is meant by salutatory impulses? (ii) What are meninges? Write down their function.
(iii) Differentiate between transciption and translation. (iv) Differentiate between gene and allele.
(v) Differentiate between breeds and varieties. (vi) What is meant by analgesics? Give an example.
(vii) Define hallucinogens. (viii) Differentiate between bactericidal and bacteriostatic antibiotics.

## ☆ SUBJECTIVE (Part-II) ☆

***Attempet any three Questions. Each question has 9 marks.　9 × 2 = 18***

**5. (a)** Write a complete note on Pneumonia.
**(b)** How plants remove extra carbon dioxide and oxygen outside?

**6. (a)** Explain structure and function of pituitary galnd.
**(b)** What is arthritis, describe its two types?

**7. (a)** What is AIDS? Give its causes.
**(b)** Explain binary fission with the help of amoeba.

| Test # 32 | Chapter # 10 To 18 | FULL BOOK PAPER NO. 1 | Time: 2 Hour |
|---|---|---|---|

| | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | ○ | ○ | ○ | ○ | 5. | ○ | ○ | ○ | ○ | 9. | ○ | ○ | ○ | ○ |
| 2. | ○ | ○ | ○ | ○ | 6. | ○ | ○ | ○ | ○ | 10. | ○ | ○ | ○ | ○ |
| 3. | ○ | ○ | ○ | ○ | 7. | ○ | ○ | ○ | ○ | 11. | ○ | ○ | ○ | ○ |
| 4. | ○ | ○ | ○ | ○ | 8. | ○ | ○ | ○ | ○ | 12. | ○ | ○ | ○ | ○ |

***Time : 15 Min*** ***Objective Type*** ***Total Marks : 12***

☆ **Fill the correct bubbles according to correct answer.**

| Q.1 | Questions | A | B | C | D |
|---|---|---|---|---|---|
| 1 | To which group aspirin belongs? | Drugs from animals | Drugs from bacteria | Synthetic drugs | Drugs from minerals |
| 2 | The enzyme which is used to dissolve blood clots is: | Ligase | Lipase | Urokinase | Amylase |
| 3 | The enrichment of nitrates and phosphates in water is called: | Pollution | Eutrophication | Decomposition | Nitrification |
| 4 | The units of inheritance are called: | Chromosomes | Proteins | Genes | Chromatin |
| 5 | Watson and Crick proposed the model of DNA structure in: | 1951 A.D | 1952 A.D | 1953 A.D | 1954 A.D |
| 6 | The example of insect pollinated flower is: | Corn | Rose | Willow | Hazel |
| 7 | In flower the whorl of carples is called: | Calyx | Corolla | Androecium | Gynoecium |
| 8 | The hardest connective tissue in the body is: | Tendon | Bone | Cartilage | Ligament |
| 9 | The lobe which receive impulses from skin is: | Frontal | Parietal | Occipital | Temporal |
| 10 | Paralysis is a disease due to disorder in: | Heart | Endocrine system | Liver | Nervous system |
| 11 | During lithotripsy stone is removed by: | X-rays | Surgery | Electrical shock waves | Non - electrical shock waves |
| 12 | A narrow opening present at the floor of pharynx is called: | Trachea | Nostril | Larynx | Glottis |



**Marks : 48** **☆ Subjective (Part-I) ☆** **Time: 01:45**

**2. Write short answers of any FIVE parts.** **(5 × 2 = 10 )**

(i) What are lenticels? Write their function.
(ii) Differentiate between breathing and respiration.
(iii) What is pneumonia? Write its cause.
(iv) Define Guttation.
(v) Write the name of two main organs working for homeostasis.
(vi) Define ganglion.
(vii) What is meant by stimulus?
(viii) Write the names of two hormones produced by ovaries.

**3. Write short answers of any FIVE parts.** **(5 × 2 = 10 )**

(i) Write down the roles of tendons and ligaments.
(ii) Define joint. Write down names of its two types.
(iii) What is difference between epigeal germination and hypogeal germination?
(iv) What are gonads? Write down the names of male and female gonads.
(v) Write down two main objectives of National Aids Control Program.
(vi) What is meant by nucleosomes?
(vii) Write down two main sources of variations in sexually reproducing populations.
(viii) Differentiate between breeds and cultivars.



**4. Write short answers of any FIVE parts.** **(5 × 2 = 10 )**

(i) Define Ecosystem. Give an example.
(ii) Write down four symptoms of Dengue fever.
(iii) What is meant by utrophication?
(iv) Write down the name of basic steps in genetic engineering.
(v) What is meant by Novel Protein or minifood?
(vi) What are sedatives? Write its two effects.
(vii) Differentiate between drug and addictive drugs.
(viii) What is iodine tincture? Write its use.

**☆ SUBJECTIVE (Part-II) ☆**

***Attempet any two Questions. Each question has 9 marks.*** ***9 × 2 = 18***

**5.** **(a)** Describe the structure of spinal cord. **(b)** Describe the function of human kidney.
**6.** **(a)** Describe binary fission with examples. **(b)** Explain in detail movable joints.
**7.** **(a)** Write five objectives of genetic engineering. **(b)** Write four adverse effects of acid rain.

**معزز اساتذہ کرام، السلام علیکم ورحمۃ اللہ!** گزارش ہے کہ سٹوڈنٹس کو مطالعہ سے پہلے درج ذیل دعاؤں کو باقاعدگی سے پڑھنے کی ترغیب دیں۔ جزاک اللہ۔

**عزیز طلبا و طالبات**، آپ سب بھی دعاؤں کا اہتمام ضرور کریں۔ اللہ تعالیٰ آپ سب کے اور اساتذہ کرام کے علم، زندگی اور ایمان میں برکت دے۔ آمین۔

ہمارے لیے بھی دعا کرتے رہیں۔ اللہ تعالیٰ ہم سب کے لیے دنیا و آخرت میں آسانیاں اور سکون نصیب فرمائے۔

بِسْمِ اللّٰہِ الرَّحْمٰنِ الرَّحِیْمِ ؕ

اللہ کے نام سے شروع جو رحمٰن و رحیم ہے۔

اَللّٰھُمَّ صَلِّ عَلٰی مُحَمَّدٍ وَّعَلٰٓی اٰلِ مُحَمَّدٍ کَمَا صَلَّیْتَ عَلٰٓی اِبْرٰھِیْمَ وَعَلٰٓی اٰلِ اِبْرٰھِیْمَ اِنَّکَ حَمِیْدٌ مَّجِیْدٌ ۝ اَللّٰھُمَّ بَارِکْ عَلٰی مُحَمَّدٍ وَّعَلٰٓی اٰلِ مُحَمَّدٍ کَمَا بَارَکْتَ عَلٰٓی اِبْرٰھِیْمَ وَعَلٰٓی اٰلِ اِبْرٰھِیْمَ اِنَّکَ حَمِیْدٌ مَّجِیْدٌ ۝

رَبِّ اشْرَحْ لِیْ صَدْرِیْ ۝ وَیَسِّرْ لِیْٓ اَمْرِیْ ۝ وَاحْلُلْ عُقْدَۃً مِّنْ لِّسَانِیْ ۝ یَفْقَھُوْا قَوْلِیْ ۝

رَبِّ زِدْنِیْ عِلْمًا۔ رَبِّ زِدْنِیْ عِلْمًا۔ رَبِّ زِدْنِیْ عِلْمًا۔

اَللّٰھُمَّ اِنِّیْٓ اَسْئَلُکَ عِلْمًا نَّافِعًا وَّرِزْقًا طَیِّبًا وَّ عَمَلًا مُّتَقَبَّلًا ۝

آخر میں درود شریف دوبارہ پڑھیں۔

اللہ تعالیٰ آپ کو جزا دے، آپ کے علم کے حصول میں آسانیاں عطا فرمائے۔